

January 1, 2014

Actuarial Valuation Report

Attleboro Retirement Board

Lawrence B. Stone



**stoneconsulting,inc**

5 West Mill Street, Suite 4  
Medfield, Massachusetts 02052  
T: 508.359.9600 • F: 508.359.0190  
Lstone@stoneconsult.com



October 3, 2014

Attleboro Retirement Board  
77 Park Street  
Attleboro, MA 02703

Dear Attleboro Retirement Board:

Stone Consulting, Inc. has performed a January 1, 2014 actuarial valuation of the Attleboro Retirement System. This valuation and report was prepared using generally accepted actuarial principles and practices and meets the parameters set by the Governmental Accounting Standards Board Statement (GASB) No. 27. To the best of our knowledge, this report is complete and accurate, and the assumptions used represent our best estimate of anticipated experience of the system.

As part of performing the valuation, Stone Consulting, Inc. was furnished member data by the Attleboro Retirement System's administrative staff. Although examined for general reasonableness, the data was not audited by the actuary. In addition, the administrative staff furnished financial statements that were not audited by the actuary or by the plan's auditors.

The funding objective of the plan is to fully fund the system while attempting to maintain a stable contribution amount for the upcoming fiscal year that is consistent with prior funding schedules or if employer finances allow it, to increase the contribution amount. This funding objective is being met.

We anticipate over time the contribution level to decrease as a percentage of payroll. The contribution rate is determined by adding the normal cost plus an amortization of the unfunded actuarial accrued liability. The normal cost is expected to remain at a level percentage of payroll. The length of the funding schedule contained in this actuarial valuation report is nineteen years (fully funded by 2035). The contributions are structured to increase the amortization of the unfunded liability by 4.00% each year.

The maximum length of the amortization is until Fiscal 2040. These limits are contained in Section 22F of Chapter 32 of the Massachusetts General Laws and related statutes.

The contribution amount for Fiscal Year 2016 is \$6,166,190 which is \$94,701 more than the anticipated contribution amount from the prior funding schedule. PERAC and GASB guidelines indicate that actuarial valuations should be conducted at least every other year. The Attleboro Retirement Board conducted their previous actuarial valuation effective January 1, 2012.

We are pleased to present the results of this valuation. If the Retirement Board has any questions on the content of this report, we would be glad to respond. Please note that this report is meant to be used in its entirety. Use of excerpts of this report may result in inaccurate or misleading understanding of the results.

I, Lawrence Stone, am a consultant for Stone Consulting, Inc. I am a member of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Respectfully submitted,  
STONE CONSULTING, INC.  
Actuaries for the Plan

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Lawrence B. Stone  
Member, American Academy of Actuaries

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## Introduction

This report presents the results of the actuarial valuation of the Attleboro Retirement System. The valuation was performed at the request of the Retirement Board as of January 1, 2014 for the purpose of determining the contribution requirements for Fiscal Year 2016 and beyond. The contribution requirements are based on:

- The financial condition of the system as of December 31, 2013
- The benefit provisions of M.G.L. Chapter 32 and related statutes;
- The demographics of members in the system (i.e., active and inactive participants, retirees and beneficiaries as of January 1, 2014);
- Economic assumptions regarding salary increases and investment earnings; and
- Other actuarial assumptions (e.g., withdrawals, retirement, death, etc.)

## January 1, 2014 Valuation Summary

	January 1, 2014	January 1, 2012	Change
Contribution Fiscal 2016	\$6,166,190	\$6,071,489	\$94,701
Funding Schedule Length	19 years	15 years	4 years
Amortization Increase	4.00%	4.50%	-0.50%
Funding Ratio	65%	65%	0%
Interest Rate Assumption	8.00%	8.00%	0.00%
	Select and Ultimate	Select and Ultimate	
Salary Increase Rate Assumption	Groups 1 and 2: 6.50% first 9 years, 4.00% thereafter Group 4: 7.00% first 6 years, 4.50% thereafter	Groups 1 and 2: 6.25% scaling down 9 years to 4.00% thereafter Group 4: 7.25% scaling down 8 years to 4.50% thereafter	

- The Fiscal Year 2016 contribution is \$94,701 more than the planned 2016 contribution. Stone Consulting, with agreement from the Retirement Board, values assets using a four year asset smoothing method. In this approach, asset gains and losses are recognized over a four-year period. The purpose of this approach is to avoid wide swings in asset value from one year to the next. The prior valuation used a five-year asset smoothing method.

- The System, over the two-year period from January 1, 2012 through December 31, 2013, experienced a 16.5% annual return on the market value of assets versus our assumption of an 8.00% return which resulted in a \$17,009,000 net actuarial gain. The System's asset portfolio, effective December 31, 2013 is approximately 81% equities and real estate and 19% fixed income and short-term investments. The interest rate assumption was maintained at 8.00% to reflect anticipated market performance.
- The salary increase assumption has been altered since the prior valuation. We used a select and ultimate table (Group 1 and 2, 6.50% first 9 years with an ultimate rate of 4.00%; Group 4, 7.00% first 6 years with an ultimate rate of 4.50%). This assumption is based on expected future experience. Previously, the assumption had seen employees from groups 1 and 2 beginning at 6.25%, grading down to 4.00% after 9 years, and those in group 4 beginning at 7.25%, grading down to 4.50% over 8 years. Total compensation changed by 6.1% over the prior valuation; however average annual compensation (compensation divided by number of active members) changed by 3.7% over the two years.
- The funding level of the Attleboro Retirement System is 65% compared to 65% for the January 1, 2012 actuarial valuation. Chapter 68 requires a minimum funding ratio of 65% along with additional criteria in order to avoid being labeled an "under performing system". We believe that the Attleboro Retirement System would not be considered an "under performing system".

The schedule length is nineteen (19) years, requiring the use of Section 22F of the Massachusetts General Laws, Chapter 32. The maximum period permitted under Section 22F of Chapter 32 of the Massachusetts General Laws is 25 years (2040). The level of amortization increase has been decreased to 4.00%, from the prior schedule's increase of 4.50%.

- Non-economic assumptions were changed from the January 1, 2012 actuarial valuation. The mortality assumption is based upon the RP2000 Table projected 14 years with Scale BB. The previous assumption used the RP2000 Table without projection. The net effect of this change increased the accrued liability by \$6.3 million.

Note that we had recommended to the Board to consider generational mortality. This would have increased the accrued liability by \$6,439,000. This assumption change or additional projection to reflect expected lower mortality should be made for the next valuation cycle.

The Attleboro Retirement Board has made the following statement:

The actuarial life tables are in constant flux. The Board acknowledged the need for accepting an update to the tables by adopting the RP 2000 projected forward 14 years. We believe this table is consistent with generally accepted tables in use.

### January 1, 2014 Actuarial Valuation Results

	January 1, 2014	January 1, 2012	Percentage Change
<b>Funding</b>			
Contribution for Fiscal 2016	\$6,166,190		
Contribution for Fiscal 2016 based on current schedule		\$6,071,489	1.6%
<b>Members *</b>			
■ Actives			
a. Number	632	618	2.3%
b. Annual Compensation	\$29,239,514	\$27,568,303	6.1%
c. Average Annual Compensation	\$46,265	\$44,609	3.7%
d. Average Attained Age	48.0	47.9	0.2%
e. Average Past Service	13.0	12.9	0.8%
■ Retired, Disabled and Beneficiaries			
a. Number	390	390	0.0%
b. Total Benefits*	\$9,435,956	\$8,489,078	11.2%
c. Average Benefits*	\$24,195	\$21,767	11.2%
d. Average Age	73.3	73.5	-0.3%
■ Inactives			
a. Number	151	154	-1.9%
<b>Normal Cost</b>			
a. Total Normal Cost as of January 1, 2014	\$3,839,373	\$3,493,072	9.9%
b. Less Expected Members' Contributions	2,685,412	2,482,911	8.2%
c. Normal Cost to be funded by the Municipality	\$1,153,961	\$1,010,161	14.2%
d. Adjustment to July 1, 2015	78,762	27,408	187.4%
e. Administrative Expense Assumption	239,000	200,500	19.2%
f. Normal Cost Adjusted to July 1, 2015	\$1,471,723	\$1,238,069	18.9%
<b>Actuarial Accrued Liability as of January 1, 2014</b>			
a. Active Members	\$82,264,886	\$74,023,906	11.1%
b. Inactive Members	1,044,047	1,245,879	-16.2%
c. Retired Members and Beneficiaries	89,014,089	76,655,842	16.1%
d. Total	\$172,323,022	\$151,925,627	13.4%
<b>Unfunded Actuarial Accrued Liability</b>			
a. Actuarial Accrued Liability as of January 1, 2014	\$172,323,022	\$151,925,627	13.4%
b. Less Actuarial Value of Assets as of January 1, 2014	112,700,280	98,889,310	14.0%
c. Unfunded Actuarial Accrued Liability as of January 1, 2014	\$59,622,742	\$53,036,317	12.4%
d. Adjustment to July 1, 2015	\$3,181,312	\$2,605,535	
e. Unfunded Actuarial Accrued Liability as of July 1, 2015	\$62,804,054	\$55,641,852	

\*Excluding State reimbursed COLA

## Demographic Information

	January 1, 2014	Percentage Change
<b>Members</b>		
■ Actives		
a. Number	632	2.3%
b. Annual Compensation	\$29,239,514	6.1%
c. Average Annual Compensation	\$46,265	3.7%
d. Average Attained Age	48.0	0.2%
e. Average Past Service	13.0	0.8%
■ Retired, Disabled and Beneficiaries		
a. Number	390	0.0%
b. Total Annual Retirement Allowance excluding State-reimbursed COLA	\$9,435,956	11.2%
■ Inactives		
a. Number	151	-1.9%

- The data was supplied by the Attleboro Retirement Board. The data was checked under broad parameters for reasonableness. With the assistance of the staff of the Attleboro Retirement Board, we were able to develop a database sufficient for valuation purposes.

## History of Active Participants

Valuation Year	Number	Average Age	Average Past Service	Average Ann'l Compensation
2014	632	48.0	13.0	\$46,265
2012	618	47.9	12.9	\$44,609
2010	626	N/A	N/A	\$42,582

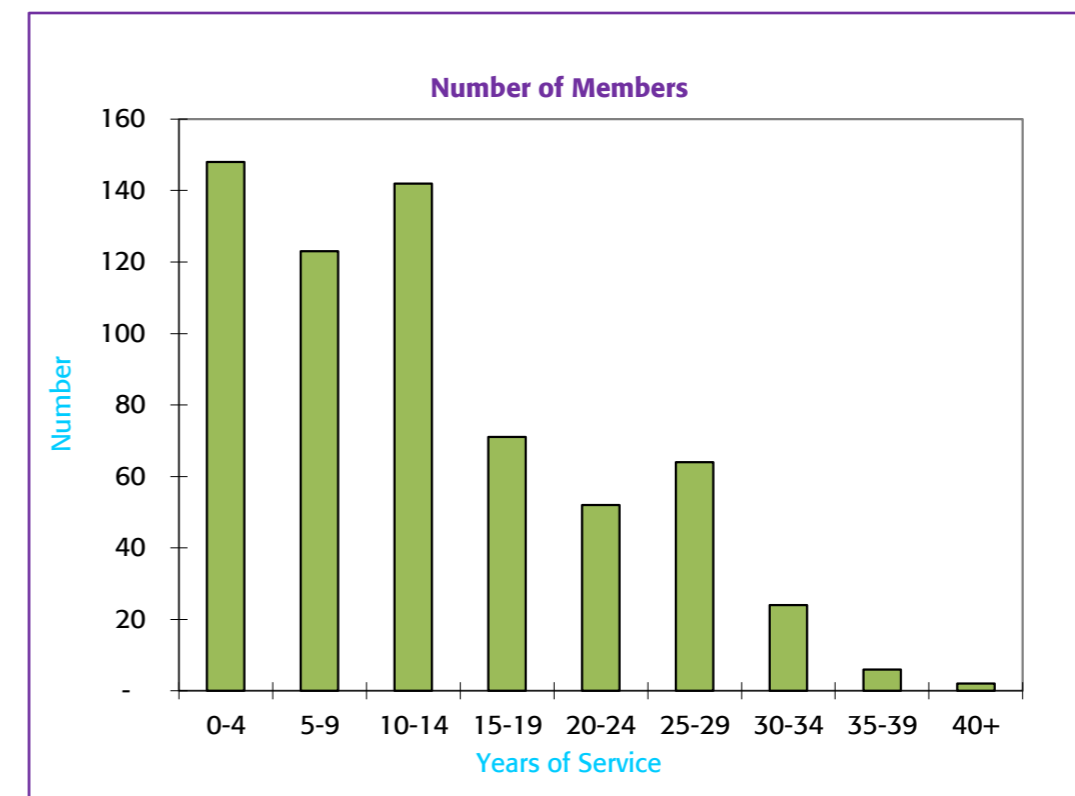
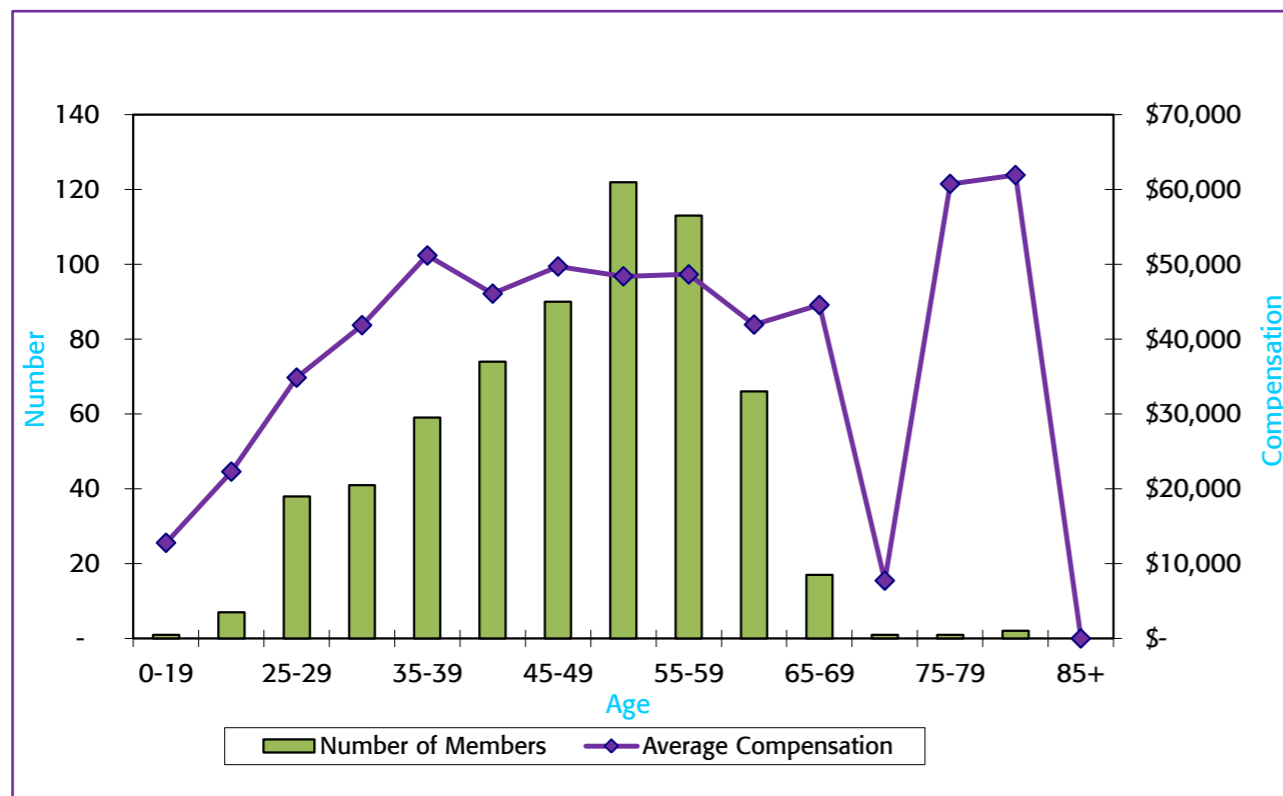
- Employee age has increased by .1 years and service has increased by .1 years over the course of the past two years. This is somewhat consistent with the trend in the Commonwealth towards an aging of the employee population. We have noted a turnaround in some clients as they have resumed hiring particularly in school departments. Average annual compensation has grown by 8.6% (2.1% annually) over the course of the past four years.

The charts on the following pages summarize demographic information regarding active and retiree members.

## Distribution of Plan Members as of January 1, 2014

Active Members

AGE	0-4 Years	5-9 Years	10-14 Years	15-19 Years	20-24 Years	25-29 Years	30-34 Years	35-39 Years	40 + Years	Total	Total Compensation	Average Compensation
0-19	1	-	-	-	-	-	-	-	-	1	\$ 12,786	\$ 12,786
20-24	7	-	-	-	-	-	-	-	-	7	156,073	22,296
25-29	33	5	-	-	-	-	-	-	-	38	1,324,876	34,865
30-34	24	13	4	-	-	-	-	-	-	41	1,716,777	41,873
35-39	15	21	22	1	-	-	-	-	-	59	3,020,322	51,192
40-44	21	14	20	13	5	1	-	-	-	74	3,410,637	46,090
45-49	15	21	16	9	15	14	-	-	-	90	4,474,956	49,722
50-54	18	18	34	15	14	16	7	-	-	122	5,905,502	48,406
55-59	9	15	27	18	9	18	13	4	-	113	5,498,525	48,660
60-64	5	12	11	10	9	13	4	1	1	66	2,768,978	41,954
65-69	-	4	6	4	-	2	-	1	-	17	757,722	44,572
70-74	-	-	-	1	-	-	-	-	-	1	7,727	7,727
75-79	-	-	1	-	-	-	-	-	-	1	60,755	60,755
80-84	-	-	1	-	-	-	-	-	1	2	123,880	61,940
85+	-	-	-	-	-	-	-	-	-	-	-	-
<b>TOTAL</b>	<b>148</b>	<b>123</b>	<b>142</b>	<b>71</b>	<b>52</b>	<b>64</b>	<b>24</b>	<b>6</b>	<b>2</b>	<b>632</b>	<b>\$ 29,239,514</b>	<b>\$ 46,265</b>

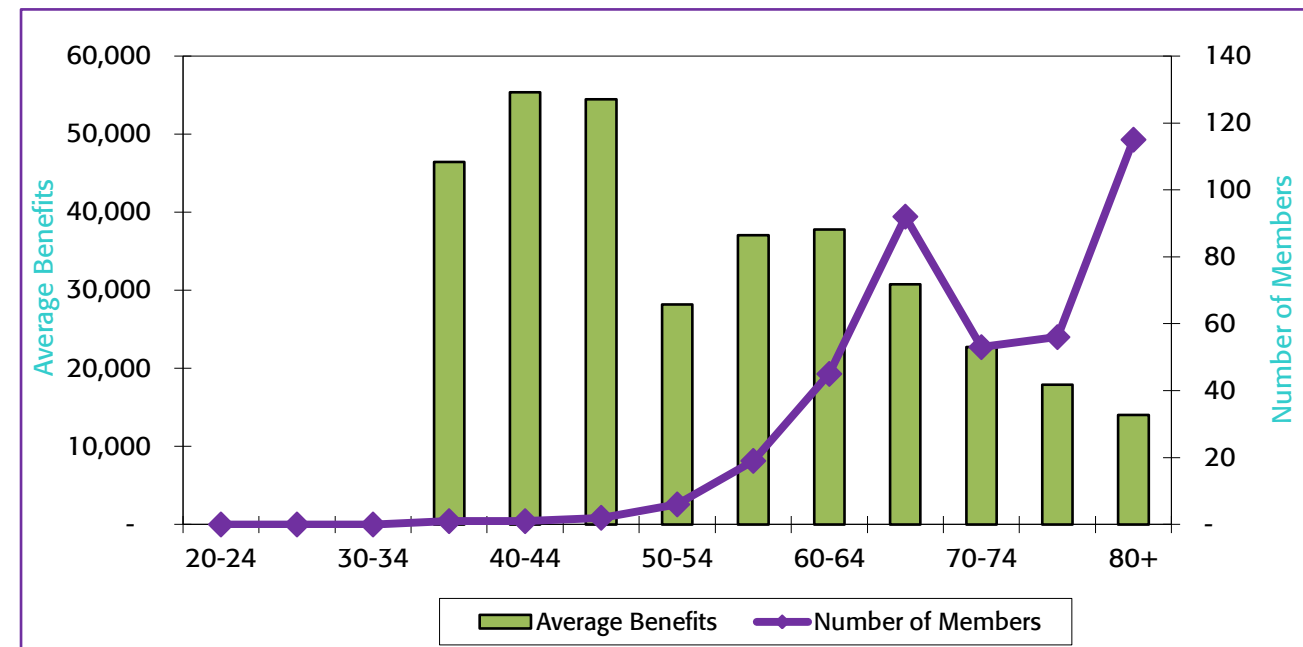


**Distribution of Plan Members as of January 1, 2014**  
Retired Members

Retired Members and Beneficiaries			
Age	Number	Average Benefit	Total Benefit
20-24	-	-	-
25-29	-	-	-
30-34	-	-	-
35-39	-	-	-
40-44	-	-	-
45-49	-	-	-
50-54	4	29,898	119,592
55-59	11	39,835	438,184
60-64	41	38,782	1,590,070
65-69	86	31,176	2,681,097
70-74	45	22,779	1,025,035
75-79	52	17,068	887,547
80+	110	13,830	1,521,320
<b>TOTAL</b>	<b>349</b>	<b>\$ 23,676</b>	<b>\$ 8,262,845</b>

Disabled Members			
Age	Number	Average Benefit	Total Benefit
20-24	-	-	-
25-29	-	-	-
30-34	-	-	-
35-39	1	46,426	46,426
40-44	1	55,378	55,378
45-49	2	54,477	108,955
50-54	2	24,804	49,608
55-59	8	33,194	265,551
60-64	4	27,258	109,032
65-69	6	25,247	151,481
70-74	8	22,561	180,486
75-79	4	28,413	113,653
80+	5	18,508	92,541
<b>TOTAL</b>	<b>41</b>	<b>\$ 28,612</b>	<b>\$ 1,173,111</b>

Total			
Age	Number	Average Benefit	Total Benefit
20-24	-	-	-
25-29	-	-	-
30-34	-	-	-
35-39	1	46,426	46,426
40-44	1	55,378	55,378
45-49	2	54,477	108,955
50-54	6	28,200	169,200
55-59	19	37,039	703,735
60-64	45	37,758	1,699,102
65-69	92	30,789	2,832,578
70-74	53	22,746	1,205,521
75-79	56	17,879	1,001,201
80+	115	14,034	1,613,860
<b>TOTAL</b>	<b>390</b>	<b>\$ 24,195</b>	<b>\$ 9,435,956</b>



Benefits shown are net of State reimbursed COLA.

## Valuation Methodology

Stone Consulting, Inc. used the Entry Age Normal actuarial funding method in this actuarial valuation. The use of the Entry Age Normal actuarial funding method is consistent with the requirements of Chapter 32 of the Massachusetts General Laws.

### NORMAL COST

	January 1, 2014	% of Payroll*
Gross Normal Cost (GNC)	\$3,839,373	13.1%
Employees Contribution	\$2,685,412	9.2%
Net Normal Cost (NNC)	\$1,153,961	3.9%
Adjusted to Beginning of Fiscal Year 2016	\$78,762	
Administrative Expense	<u>\$239,000</u>	0.8%
Adjusted Net Normal Cost With Admin. Expense	\$1,471,723	

\*Payroll paid in 2013 for employees as of January 1, 2014 is \$29,239,514. Payroll for new hires in 2013 was annualized.

- The gross normal cost (GNC) is the “price” of benefits accruing in the current year if the assumptions underlying the normal cost were realized.
- An individual normal cost represents that part of the cost of a member’s future benefits that are assigned to the current year as if the costs are to remain level as a percentage of the member’s pay. Benefits payable under all circumstances (i.e., retirement, death, disability, and withdrawals) are included in this calculation.
- Anticipated employee contributions to be made during the year are subtracted from the GNC to determine employer normal cost, or net normal cost (NNC).
- Administrative expenses added to the NNC. The administrative expense does not include investment manager and custodial fees. These fees are considered part of the interest rate assumption that is net of fees.

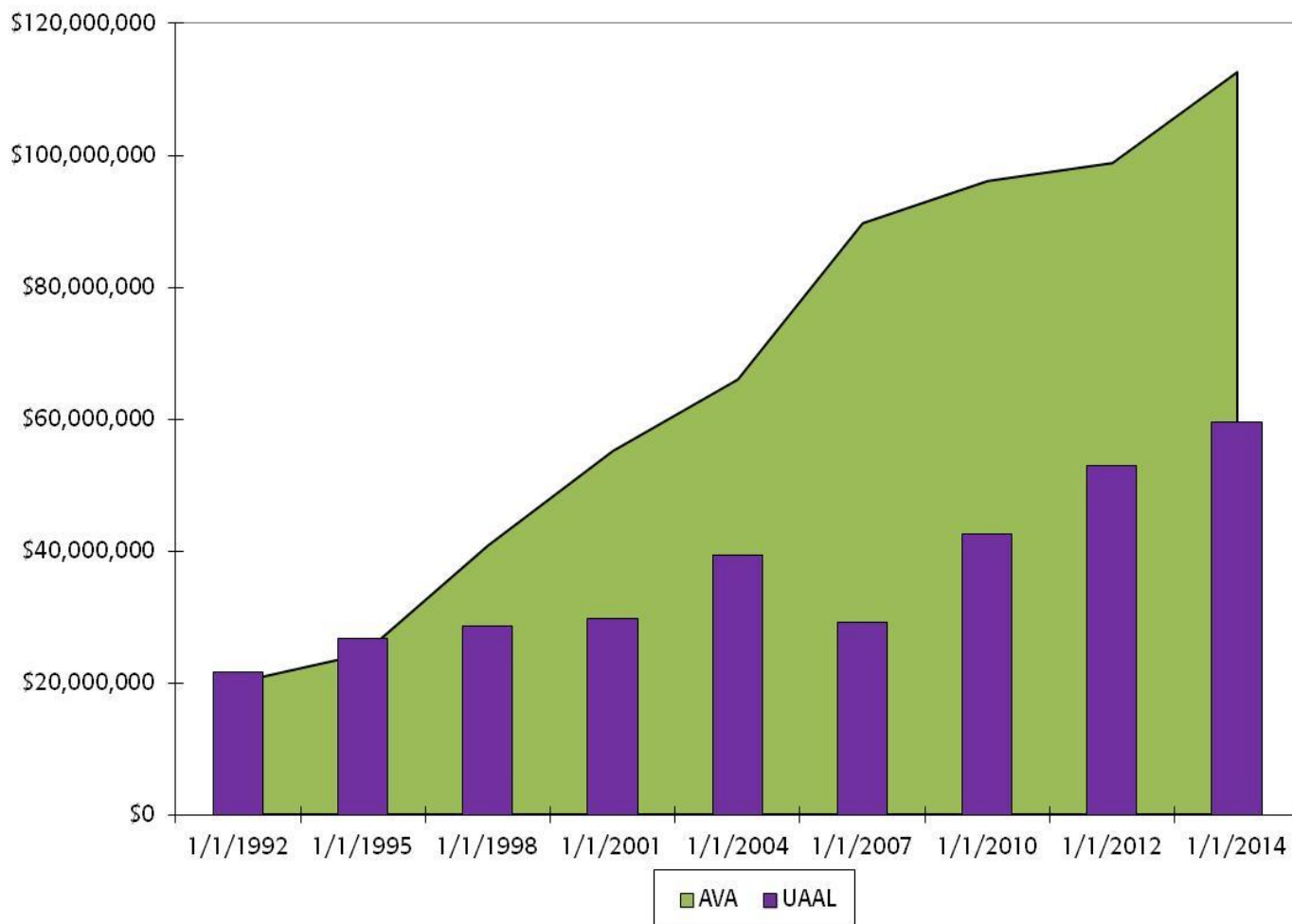
### Actuarial Accrued Liability and Funded Status

		January 1, 2014	Percentage Change
<b>Active Actuarial Accrued Liability</b>	\$	82,264,886	11.1%
Superannuation	\$ 74,852,321		
Death	\$ 2,005,685		
Disability	\$ 4,594,680		
Withdrawal	\$ 812,200		
<b>Retiree, Inactive, Survivor and Beneficiary Actuarial Accrued Liability</b>	\$	90,058,136	15.6%
Retirees and Beneficiaries	\$ 76,294,590		
Disabled	\$ 12,719,499		
Inactive	\$ 1,044,047		
<b>Total Actuarial Accrued Liability (AAL)</b>	\$	172,323,022	13.4%
<b>Actuarial Value of Assets (AVA)</b>	\$	112,700,280	14.0%
<b>Unfunded Actuarial Accrued Liability</b>	\$	59,622,742	12.4%
<b>Funded Ratio (AVA / AAL)</b>			
2014 (8.00% interest rate):	65%		
2012 (8.00% interest rate):	65%		

- Actuarial Accrued Liability (AAL) is the “price” of benefits attributable to benefits earned in past years, or in other words, represents today’s value of all benefits earned by active and inactive members.
- The total AAL is \$172,323,022. This along with an actuarial value of assets of \$112,700,280 produces a funded status of 65%. This compares to a funded status of 65% for the 2012 valuation.

The chart on the following page is a history of the unfunded actuarial accrued liability (UAAL) and the valuation assets (AVA) over the course of the past nine actuarial valuations.

### History of Actuarial Valuation of Assets (AVA) and Unfunded Actuarial Accrued Liability (UAAL)



### Development of Funding Schedule

Net Employer Normal Cost for Fiscal 2016	1,471,723
Net 3(8)(c) Payments	85,226
Amortization	<u>4,609,241</u>
Total Appropriation required for Fiscal 2016	6,166,190

- The funding schedule is composed of the normal cost, the net 3(8)(c) payments and the amortization of the actuarial accrued unfunded liability and is adjusted by the administrative expense assumption. The contribution is assumed to be made at the beginning of the Fiscal Year. The 3(8)(c) payments are the amount that the Attleboro Retirement System pays to or receives from other retirement boards for service that a retiree had with a different retirement system. The net 3(8)(c) payments is the difference between what the Attleboro Retirement System paid out minus what was received by the System.
- The contribution amount for Fiscal 2016 is \$6,166,190. The funding schedule is presented on page 11. The schedule's length is nineteen (19) years (for the fresh start base), using Section 22F of MGL Chapter 32.
- In developing the funding schedule, we used a fresh start approach in which the unfunded actuarial accrued liability (UAAL), other than the UAAL due to past early retirement incentives, is reamortized instead of maintaining the existing amortization amount and separately amortizing the actuarial gain or loss. The use of a fresh-start approach can result in a funding schedule in which the changes in contribution amounts from year to year are more consistent. The maximum amortization increase allowed under Chapter 32 Section 22F is 4.00%.
- Unrecognized asset gains due to asset smoothing will be recognized in Fiscal Years 2018 and 2020 (\$6,557,874 and \$3,064,709, respectively). These deferred gains have not been reflected in the funding schedule.

## ATTLEBORO RETIREMENT SYSTEM

### FUNDING SCHEDULE

Fiscal Year	Normal Cost	Unfunded Liability*	Funding Amortization of UAAL	Net 3(8)(c) Payments	Schedule Contribution
2016	1,471,723	62,804,054	4,609,241	85,226	6,166,190
2017	1,537,951	62,850,398	4,794,474	85,226	6,417,651
2018	1,607,158	62,700,398	4,987,154	85,226	6,679,539
2019	1,679,480	62,330,303	5,187,579	85,226	6,952,286
2020	1,755,057	61,714,141	5,396,062	85,226	7,236,345
2021	1,834,035	60,823,526	5,612,925	85,226	7,532,185
2022	1,916,566	59,627,450	5,838,506	85,226	7,840,298
2023	2,002,812	58,092,059	6,073,155	85,226	8,161,193
2024	2,092,938	56,180,417	6,317,238	85,226	8,495,402
2025	2,187,120	53,852,234	6,571,132	85,226	8,843,479
2026	2,285,541	51,063,589	6,835,234	85,226	9,206,001
2027	2,388,390	47,766,623	7,109,954	85,226	9,583,570
2028	2,495,868	43,909,203	7,395,718	85,226	9,976,812
2029	2,608,182	39,434,564	7,692,970	85,226	10,386,378
2030	2,725,550	34,280,921	7,383,205	85,226	10,193,981
2031	2,848,200	29,049,533	7,678,533	85,226	10,611,959
2032	2,976,369	23,080,680	7,985,674	85,226	11,047,269
2033	3,110,305	16,302,606	8,305,101	85,226	11,500,633
2034	3,250,269	8,637,305	8,637,305	85,226	11,972,800
2035	3,396,531	-	-	85,226	3,481,757

#### Amortization of Unfunded Liability as of July 1, 2015

Year	Type	Original Amort. Amount	Percentage Increasing	Original # of Years	Current Amort. Amount	Years Remaining
2003	ERI	201,194	4.25%	27	345,624	14
2016	Fresh Start	4,263,617	4.00%	19	4,263,617	19

#### Notes on Amortization of Unfunded Liability

Year is the year the amortization base was established.

Type is the reason for the creation of the base. Examples are Gain/(Loss) or Fresh Start.

Original Amortization Amount is the annual amortization amount when the base was established.

Percentage Increasing is the percentage that the Original Amortization Amount increases per year.

Original # of Years is the number of years over which the base is being amortized.

Current Amortization Amount is the amortization payment amount for this year.

Years Remaining is the number of years left to amortize the base.

\* Unfunded liability amounts in FY2018 and FY2020 do not reflect the following deferred gains:

2018: \$6,557,874

2020: \$3,064,709

### Assumptions and Methodology Summary

The principal actuarial assumptions used in this valuation are the same as the assumptions used in the previous valuation, except where noted, and are summarized in the following table:

Valuation Date	January 1, 2014 Valuation
Interest Rate	8.00% (same as prior valuation).
Salary Increase	<ul style="list-style-type: none"><li>• Group 1 and 2: 6.50% for 9 years, 4.00% ultimate</li><li>• Group 4: 7.00% for 6 years, 4.50% ultimate</li></ul>
COLA	3% of \$12,000
COLA Frequency	Granted every year
Mortality	RP-2000 table projected 14 years with scale BB. During employment the healthy employee mortality table is used. Post-employment the healthy annuitant table is used. For members retired under an Accidental Disability (job-related), 40% of deaths are assumed to be from the same cause as the disability. Disabled mortality RP-2000 table projected 14 years with scale BB, ages set forward 2 years. (Prior valuation used RP-2000 without projection.)
Overall Disability	Groups 1 and 2 45% ordinary disability 55% accidental disability  Group 4 10% ordinary disability 90% accidental disability
Retirement Rates	Groups 1 and 2 Ages 55 – 70  Group 4 Ages 50 – 65
Administrative Expense	\$239,000 budget estimated for FY 2016 projected from 2014 calendar year budget of \$233,876 provided by Attleboro Retirement Board.

## Assets

a.	Cash	\$	4,300,018.75
b.	Fixed Income		1,618.47
c.	Equities		61,242,391.57
d.	Pooled Domestic Equity Funds		6,338,760.93
e.	Pooled International Equity Funds		18,283,308.23
f.	Pooled Global Fixed Income Funds		18,551,123.46
g.	Pooled Real Estate Funds		<u>13,575,531.84</u>
h.	Sub-Total:	\$	122,292,753.25
i.	Accounts Receivable		130,554.35
j.	Accounts Payable		(100,452.98)
k.	Interest Due and Accrued		<u>8.20</u>
l.	Sub-Total:	\$	30,109.57
m.	Market Value of Assets [(h) + (l)]	\$	122,322,862.82

- We were furnished with the System's annual report by the Board. The market value of assets as of December 31, 2013 (adjusted for payables and receivables) is \$122,322,862.82.
- The asset allocation is approximately 19% fixed income, cash, receivables and payables and 81% equities and real estate. Historically, 10 to 11% has been the expected long-term rate of return for equities, and 6% to 7% has been the expected long-term rate of return for fixed income securities. Many economists and investment professionals are projecting lower returns of 6.25% to 9.00% for equities and 3.65% to 6.00% for fixed income securities. In light of these projections, as well as historical investment returns, the 8.00% interest rate assumption is within the reasonable assumption range. We encourage close monitoring for changes in investment performance against expectations.
- Actuarial value of assets (AVA) of \$112,700,280 is based on a four-year smoothing method. Investment gains or losses above or below the expected rate of investment return are recognized over 4 years, 25% per year. The AVA must be no more than 120% of the market value of assets and no less than 80% of the market value of assets. The previous valuation used 5-year asset smoothing, which recognizes gains and losses over a five-year period, 20% at a time. This change increased the actuarial value of assets by \$1,063,000 and consequentially decreased the unfunded liability by the same amount.

## Calculation of Valuation Assets as of January 1, 2014

### 4-YEAR PHASE-IN OF GAINS AND LOSSES

1. Market value of assets including receivable/payable as of 01/01/2014 \$122,322,863

2. Phase-in of asset gains and losses

	Plan Year (1)	Original Amount (2)	Percent Unrecognized (3)	Amount Unrecognized (2) x (3)
a.	2013	\$12,258,836	75%	\$9,194,127
b.	2012	\$4,750,498	50%	\$2,375,249
c.	2011	(\$7,787,171)	25%	(\$1,946,793)
d.	2010	\$5,717,723	0%	\$0
e.	2009	\$7,739,581	0%	\$0
f.	2008	(\$33,961,109)	0%	\$0
g.	Total			\$9,622,583

3. Valuation assets without corridor as of 01/01/2014 \$112,700,280  
(1. - 2.g.)

4. Corridor Check

a. 80% of Market Value \$97,858,290  
b. 120% of Market Value \$146,787,435

5. Valuation assets with corridor as of 01/01/2014 \$112,700,280  
3. within Corridor

6. Calculation of return on valuation assets

a. Valuation assets as of 01/01/2013 \$98,889,310  
b. ER contribs + EE contribs - Ben Pymts - Expenses \$(2,613,229)  
c. Actual return on valuation assets \$16,424,198  
5. - (6.a. + 6.b.)  
d. Weighted value of valuation assets \$97,533,459  
e. Return on valuation assets 16.8%  
6.c. / 6.d.  
f. Annualized return on assets 8.1%

## Disclosure Information Under GASB Statement 25

### SCHEDULES OF FUNDING PROGRESS

(Dollars In Thousands)

Actuarial Valuation Date	Actuarial Value of Assets A	Actuarial Accrued Liability B	Unfunded AAL (UAAL) B-A	Funded Ratio A/B	Covered Payroll C	UAAL as a % of Covered Payroll (B-A)/C
1/1/2014	\$112,700	\$172,323	\$59,623	65%	\$29,240	204%
1/1/2012	\$98,889	\$151,926	\$53,036	65%	\$27,568	192%
1/1/2010	\$96,159	\$138,736	\$42,578	69%	\$26,656	160%
1/1/2007	\$89,751	\$118,944	\$29,194	76%	\$24,238	120%
1/1/2004	\$66,029	\$105,340	\$39,112	63%	\$21,800	180%

### NOTES TO SCHEDULES

Additional information as of the latest actuarial valuation follows:

Valuation Date	1/1/2014
Actuarial cost method	Entry Age Normal
Amortization method	Fresh Start, 4.00% Amortization
Remaining amortization period	19 years for the fresh start base
Asset valuation method	Market value adjusted by accounts payable and receivables adjusted to phase in over 4 years investment gains or losses above or below the expected rate of investment return. The actuarial value of assets must be no less than 80% of the adjusted market value nor more than 120% of the adjusted market value. Market value of assets is \$122,322,863
Actuarial assumptions:	
Investment Rate of Return	8.00% per year
Projected Salary Increases	Groups 1 and 2: 6.50% first 9 years, 4.00% Ultimate Group 4: 7.00% first 6 years, 4.50% Ultimate

■ Attleboro Retirement Board  
Actuarial Valuation as of January 1, 2014

**PERAC Information Disclosure**

The most recent actuarial valuation of the System was prepared by Stone Consulting, Inc. as of January 1, 2014

The normal cost for employees on that date was:	\$2,685,412	9.2%	of payroll
The normal cost for the employer was:	\$1,153,961	3.9%	of payroll

The actuarial liability for active members was:	\$82,264,886
The actuarial liability for retired members was (includes inactives):	\$90,058,136
Total actuarial accrued liability:	\$172,323,022
System assets as of that date (market value: \$122,322,863):	\$112,700,280
Unfunded actuarial accrued liability:	\$59,622,742

The ratio of system's assets to total actuarial liability was:	65%
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As of that date the total covered employee payroll was:	\$29,239,514
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The principal actuarial assumptions used in the valuation are as follows:

Investment Return: 8.00% per annum  
Rate of Salary Increase: Select and ultimate rate

**SCHEDULE OF FUNDING PROGRESS** (Dollars in \$000's)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a % of Covered Payroll ((b-a)/c)
1/1/2014	\$112,700	\$172,323	\$59,623	65%	\$29,240	204%
1/1/2012	\$98,889	\$151,926	\$53,036	65%	\$27,568	192%
1/1/2010	\$96,159	\$138,736	\$42,578	69%	\$26,656	160%
1/1/2007	\$89,751	\$118,944	\$29,194	76%	\$24,238	120%
1/1/2004	\$66,029	\$105,340	\$39,112	63%	\$21,800	180%

## Actuarial Methods and Assumptions

### ACTUARIAL METHODS

#### Actuarial Cost Method

The Entry Age Normal Actuarial Cost Method has been used in this valuation. Under this method, the normal cost is the amount calculated as the level percentage of compensation necessary to fully fund the prospective benefits from each member's entry age to retirement age.

The actuarial accrued liability represents the theoretical accumulation of all prior years' normal costs for the plan members as if the program had always been in effect. The unfunded actuarial accrued liability is the excess of the actuarial accrued liability over plan assets.

#### Asset Valuation Method

Market value of assets (adjusted by payables and receivables) adjusted to phase in investment gains or losses above or below the expected rate of investment return over a four-year rolling period. The phase-in is 25% for year one, 50% for year two, 75% for year three, and 100% for year four. The actuarial value of assets may be no less than 80%, or more than 120% of the market value of assets plus payables and receivables.

#### Fiscal Year Adjustment

The actuarial results are adjusted by the valuation interest rate and salary scale to the beginning of Fiscal Year 2016. The unfunded actuarial accrued liability is rolled forward with normal cost and further adjusted by anticipated contributions and interest.

### ACTUARIAL ASSUMPTIONS

#### Investment Return

8.00% per year net of investment expenses.

#### Regular Interest Rate Credited to Annuity Savings Account

2% per year.

#### Salary Increases

Select and ultimate salary assumption – 4.00% base rate with 9 years of 6.50% steps for groups 1 and 2, 4.50% base rate with 6 years of 7.00% steps for group 4.

## Actuarial Methods and Assumptions (Continued)

### Withdrawal Prior to Retirement

The rates shown at the following sample ages illustrate the withdrawal assumption. Withdrawal rates are set to zero if the retirement rate at that age is nonzero.

Rate of Withdrawal

Service	Group 1 and 2	Group 4
0	15%	1.5%
1	12%	1.5%
2	10%	1.5%
3	9%	1.5%
4	8%	1.5%
5	7.6%	1.5%
10	5.4%	1.5%
15	3.3%	0.0%
20	2.0%	0.0%
25	1.0%	0.0%
30+	0.0%	0.0%

### Disability Prior to Retirement

The rates shown at the following sample ages illustrate the assumption regarding the incidence of disability:

Rate of Disability

Age	Group 1 and 2	Group 4
20	0.01%	0.10%
25	0.02%	0.20%
30	0.03%	0.30%
35	0.06%	0.30%
40	0.10%	0.30%
45	0.15%	1.00%
50	0.19%	1.25%
55	0.24%	1.20%
60	0.28%	0.85%

Disability is assumed to be 45% ordinary and 55% accidental for Group 1 and 2 and 10% ordinary and 90% accidental for Group 4.

## Actuarial Methods and Assumptions (Continued)

### Rates of Retirement

The rates shown at the following ages illustrate the assumption regarding the incidence of retirement, once the member has achieved 10 years of service:

Age	Group 1 & 2 Male	Group 1 & 2 Female	Group 4	Hired after 4/1/2012		
				Group 1 & 2 Male	Group 1 & 2 Female	Group 4
50	1%	1.5%	2%	0%	0%	1.5%
51	1%	1.5%	2%	0%	0%	1.5%
52	1%	2.0%	2%	0%	0%	1.5%
53	1%	2.5%	2%	0%	0%	1.5%
54	2%	2.5%	7.5%	0%	0%	5%
55	2%	5.5%	15%	0%	0%	10%
56	2.5%	6.5%	10%	0%	0%	7%
57	2.5%	6.5%	10%	0%	0%	20%
58	5%	6.5%	10%	0%	0%	10%
59	6.5%	6.5%	15%	0%	0%	15%
60	12%	5%	20%	25%	30%	20%
61	20%	13%	20%	20%	13%	20%
62	30%	15%	25%	30%	15%	25%
63	25%	12.5%	25%	25%	12.5%	25%
64	22%	18%	30%	22%	18%	30%
65	40%	15%	100%	40%	15%	100%
66	25%	20%	N/A	25%	20%	N/A
67	25%	20%	N/A	25%	20%	N/A
68	30%	25%	N/A	30%	25%	N/A
69	30%	20%	N/A	30%	20%	N/A
70	100%	100%	N/A	100%	100%	N/A

### Mortality

The RP-2000 mortality table (sex-distinct) projected 14 years with scale BB. (Prior valuation used RP-2000 mortality table without projection). During employment the healthy employee mortality table is used. Post-employment the healthy annuitant table is used.

### Disabled Life Mortality

The RP-2000 mortality table for healthy annuitants (sex-distinct) projected 14 years with scale BB set-forward by 2 years. Death is assumed to be due to the same cause as the disability 40% of the time. (Prior valuation used RP-2000 mortality table without projection).

## **Actuarial Methods and Assumptions** (Continued)

### Family Composition

Members assumed married with 2 dependent children – one male and one female both age 15; age difference between member and spouse assumed to be 3 years (the male being the older).

### Cost-of-Living Increases

A 3% COLA on the first \$12,000 of a member's retirement allowance is assumed to be granted every year.

### Administrative Expenses

Estimated budgeted amount of \$239,000 for the Fiscal Year 2016 excluding investment management fees and custodial fee is added to the Normal Cost.

### Step Increases

Step increases are assumed to be part of the salary increase assumption.

### Credited Service

All service is assumed to be due to employment with the municipality.

### Contribution Timing

Contributions are assumed to be made in the beginning of the fiscal year (July 1).

### Total Payroll Increase

The total payroll is assumed to increase at 4.00% per year.

### Valuation Date

January 1, 2014.

## Summary of Principal Provisions

### 1. PARTICIPANT

Participation is mandatory for all full-time employees whose employment commences before age 65. There are three classes of members in the retirement system:

- Group 1: general employees
- Group 2: employees in specified hazardous occupations (e.g., electricians)
- Group 4: police and firefighters

### 2. MEMBER CONTRIBUTIONS

Member contributions vary depending upon date hired as follows:

Date of Hire	Member Contribution Rate
Prior to 1975	5% of Pay
1975 – 1983	7% of Pay
1984 – June 30, 1996	8% of Pay
After June 30, 1996	9% of Pay

Members hired after 1978 contribute an additional 2% of pay over \$30,000.

### 3. PAY

#### a. Pay

Gross regular compensation excluding bonuses, overtime, severance pay, unused sick pay, and other similar compensation.

#### b. Average Pay

The average of pay during the three consecutive years that produce the highest average or, if greater, during the last three years (whether or not consecutive) preceding retirement. For members hired after April 1, 2012, five-year averages will be used.

### 4. CREDITED SERVICE

Period during which an employee contributes to the retirement system plus certain periods of military service and "purchased" service.

### 5. SERVICE RETIREMENT

#### a. Eligibility

Completion of 20 years of credited service or attainment of age 55 and completion of 10 years of credited service. If hired prior to 1978 or a member of group 4, attainment of age 55.

## Summary of Principal Provisions (Continued)

### b. Retirement Allowance

Determined as the product of the member's benefit percentage, average pay and credited service, where the benefit percentage is shown below (maximum allowance of 80% of average pay):

Benefit Percentage	Group 1	Group 2	Group 4
2.5%	65+	60+	55+
2.4	64	59	54
2.3	63	58	53
2.2	62	57	52
2.1	61	56	51
2.0	60	55	50
1.9	59	N/A	49
1.8	58	N/A	48
1.7	57	N/A	47
1.6	56	N/A	46
1.5	55	N/A	45
Hired after April 1, 2012*			
2.5%	67+	62+	57+
2.35	66	61	56
2.20	65	60	55
2.05	64	59	54
1.90	63	58	53
1.75	62	57	52
1.60	61	56	51
1.45	60	55	50

\*Reduction is .125% for each year early instead of .15% per year for employees with over 30 years of service.

In addition, veterans receive an additional \$15 per year for each year of credited service up to 20 years

## 6. DEFERRED VESTED RETIREMENT

### a. Eligibility

Completion of 10 years of credited service (for elected and appointed members, 6 years in the event of involuntary termination).

### b. Retirement Allowance

Determined in the same manner as "Service Retirement" section above with the member eligible to start collecting a benefit at age 55, (or age 57 for post-April 1, 2012 hires) or defer until later at his or her discretion. If a member chooses, his or her contributions with interest may be withdrawn. The amount of interest he or she will receive depends on length of service and whether or not the termination of employment was voluntary.

## Summary of Principal Provisions (Continued)

### 7. ORDINARY DISABILITY RETIREMENT

#### a. Eligibility

Non-job related disability after completion of 10 years of credited service.

#### b. Retirement Allowance

Determined in the same manner as "Service Retirement" section and calculated as if the member had attained age 55 (or age 57 for those hired after April 1, 2012), if younger. Veterans receive 50% of pay (during final year) plus an annuity based on accumulated member contributions with interest.

### 8. ACCIDENTAL DISABILITY RETIREMENT

#### a. Eligibility

Disabled as a result of an accident in the performance of duties. No age or service requirement.

#### b. Retirement Allowance

72% of pay plus an annuity based on accumulated member contributions with interest. Also, a dependent's allowance per year for each child. Total allowance not to exceed 100% of pay (75% for members hired after 1987).

### 9. NON-OCCUPATIONAL DEATH

#### a. Eligibility

Dies while in active service, but not due to occupational injury. 2 years of service.

#### b. Retirement Allowance

Benefit as if Option C had been elected (see following page) and member had attained age 55 (or age 57 for those hired after April 1, 2012) if younger. Minimum monthly benefits provided as follows:  
spouse - \$500, first child - \$120, each additional child - \$90

### 10. OCCUPATIONAL DEATH

#### a. Eligibility

Dies as a result of an occupational injury.

#### b. Benefit Amount

72% of pay plus refund of annuity savings fund balance. In the case of an accidental disability retiree who dies of the same cause, the beneficiary receives 72% of the last 12 months salary or the current pension amount, whichever is greater.

## Summary of Principal Provisions (Continued)

### 11. COST-OF-LIVING INCREASES

An increase of up to 3% applied to the first \$12,000 of annual benefit. Funded by the Municipality from Fiscal Year 1999. Percentage increase is voted on each year by the Retirement Board. Cost-of-living increases granted during Fiscal Year 1982 through Fiscal 1998 are reimbursed by the Commonwealth.

### 12. OPTIONAL FORMS OF PAYMENT

- Option A

Allowance payable monthly for the life of the member.

- Option B

Allowance payable monthly for the life of the member with a guarantee of remaining member contributions with interest.

- Option C

Allowance payable monthly for the life of the member with 66-2/3% continuing to the member's beneficiary upon the member's death. If the beneficiary predeceases the member, the allowance amount "pops up" to the non-reduced amount.

## Glossary of Terms

- Present Value of Benefits

Represents the dollar value today of all benefits expected to be earned by current members if all actuarial assumptions are exactly realized.

- Actuarial Cost Method

The procedure that is used to allocate the present value of benefits between the liability that is attributable to past service (Actuarial Accrued Liability) and that attributable to future service.

- Actuarial Assumptions

Estimates are made as to the occurrence of certain events that determine the level of benefits to be paid and how long they will be provided. The more important actuarial assumptions include the investment return on assets, salary increases and the rates of turnover, disability, retirement and mortality.

■ Actuarial Accrued Liability

The portion of the Present Value of Benefits that is attributable to past service.

■ Normal Cost

The portion of the Present Value of Benefits that is attributable to benefits to be earned in the coming year.

■ Actuarial Assets

Market value of assets (adjusted by payables and receivables) adjusted to phase in investment gains or losses above or below the expected rate of investment return over a five-year rolling period. The phase-in is 20% for year one, 40% for year two, 60% for year three, 80% for year four and 100% for year five. The actuarial value of assets may be no less than 90%, or more than 110% of the market value of assets plus payables and receivables.

■ Unfunded Actuarial Accrued Liability

That portion of the Actuarial Accrued Liability not covered by System Assets.

■ PERAC

Public Employee Retirement Administration Commission, a division of the State government which has regulatory authority over the administration of the retirement system.

■ PRIT

Pension Reserves Investment Trust Fund is the state controlled and administered fund for the investment of assets for members of the retirement system.

■ GASB

Government Accounting Standards Board (issues guidance for disclosure of retirement system liabilities).